

## SPoRT's Participation in the GOES-R Proving Ground Activity

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### AGU IN32: IN32: The Near-Future: GOES-R and Next Generation Weather and Observation Constellations

The next generation geostationary satellite, GOES-R, will carry two new instruments with unique atmospheric and surface observing capabilities, the Advanced Baseline Imager (ABI) and the Geostationary Lightning Mapper (GLM), to study short-term weather processes. The ABI will bring enhanced multispectral observing capabilities with frequent refresh rates for regional and full disk coverage to geostationary orbit to address many existing and new forecast challenges. The GLM will, for the first time, provide the continuous monitoring of total lightning flashes over a hemispherical region from space. NOAA established the GOES-R Proving Ground activity several years ago to demonstrate the new capabilities of these instruments and to prepare forecasters for their day one use. Proving Ground partners work closely with algorithm developers and the end user community to develop and transition proxy data sets representing GOES-R observing capabilities. This close collaboration helps to maximize refine algorithms leading to the delivery of a product that effectively address a forecast challenge. The NASA Short-term Prediction Research and Transition (SPoRT) program has been a participant in the NOAA GOES-R Proving Ground activity by developing and disseminating selected GOES-R proxy products to collaborating WFOs and National Centers. Established in 2002 to demonstrate the weather and forecasting application of real-time EOS measurements, the SPoRT program has grown to be an end-to-end research to operations activity focused on the use of advanced NASA modeling and data assimilation approaches, nowcasting techniques, and unique high-resolution multispectral data from EOS satellites to improve short-term weather forecasts on a regional and local scale. Participation in the Proving Ground activities extends SPoRT's activities and taps its experience and expertise in diagnostic weather analysis, short-term weather forecasting, and the transition of research and experimental data to operational decision support systems like NAWIPS, AWIPS, AWIPS2, and Google Earth. Recent SPoRT Proving Ground activities supporting the development and use of a pseudo GLM total lightning product and the transition of the AWG's Convective Initiation (CI) product, both of which were available in AWIPS and AWIPS II environments, by forecasters during the Hazardous Weather Testbed (HWT) Spring Experiment. SPoRT is also providing a suite of SEVIRI and MODIS RGB image products, and a high resolution composite SST product to several National Centers for use in there ongoing demonstration activities. Additionally, SPoRT has involved numerous WFOs in the evaluation of a GOES-MODIS hybrid product which brings ABI-like data sets in front of the forecaster for everyday use. An overview of this activity will be presented at the conference.